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(58) Field of search

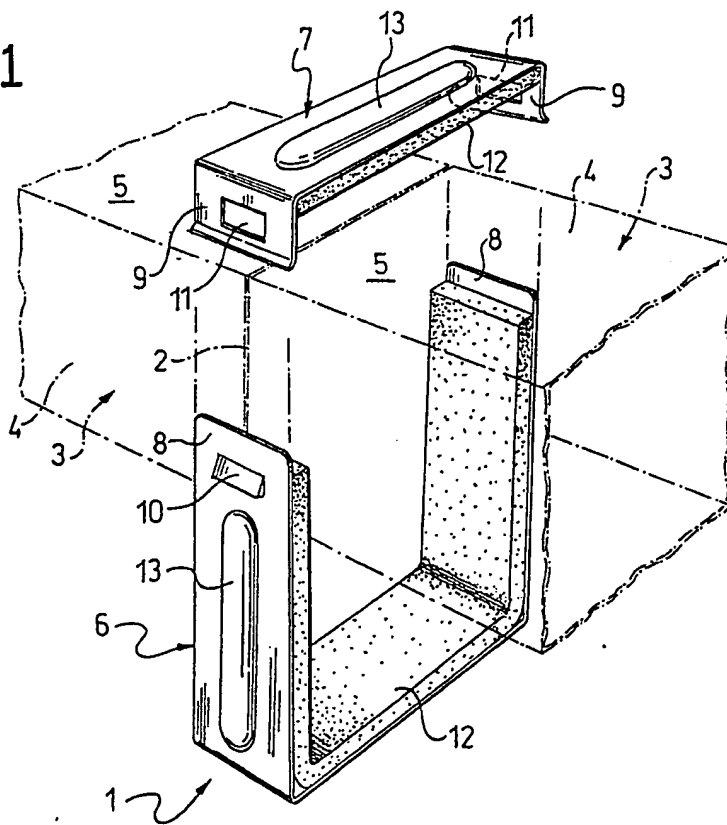
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(54) Trunking sealing gasket

(57) A sealing gasket (1) for use in joints (2) between trunking or raceway elements, for laying and encasing electric cables, comprises a holding structure composed of a pair of plate-like members (6, 7) fitting releasably by snap action around a joint (2) so as to define a joint-covering seal ring.

FIG.1



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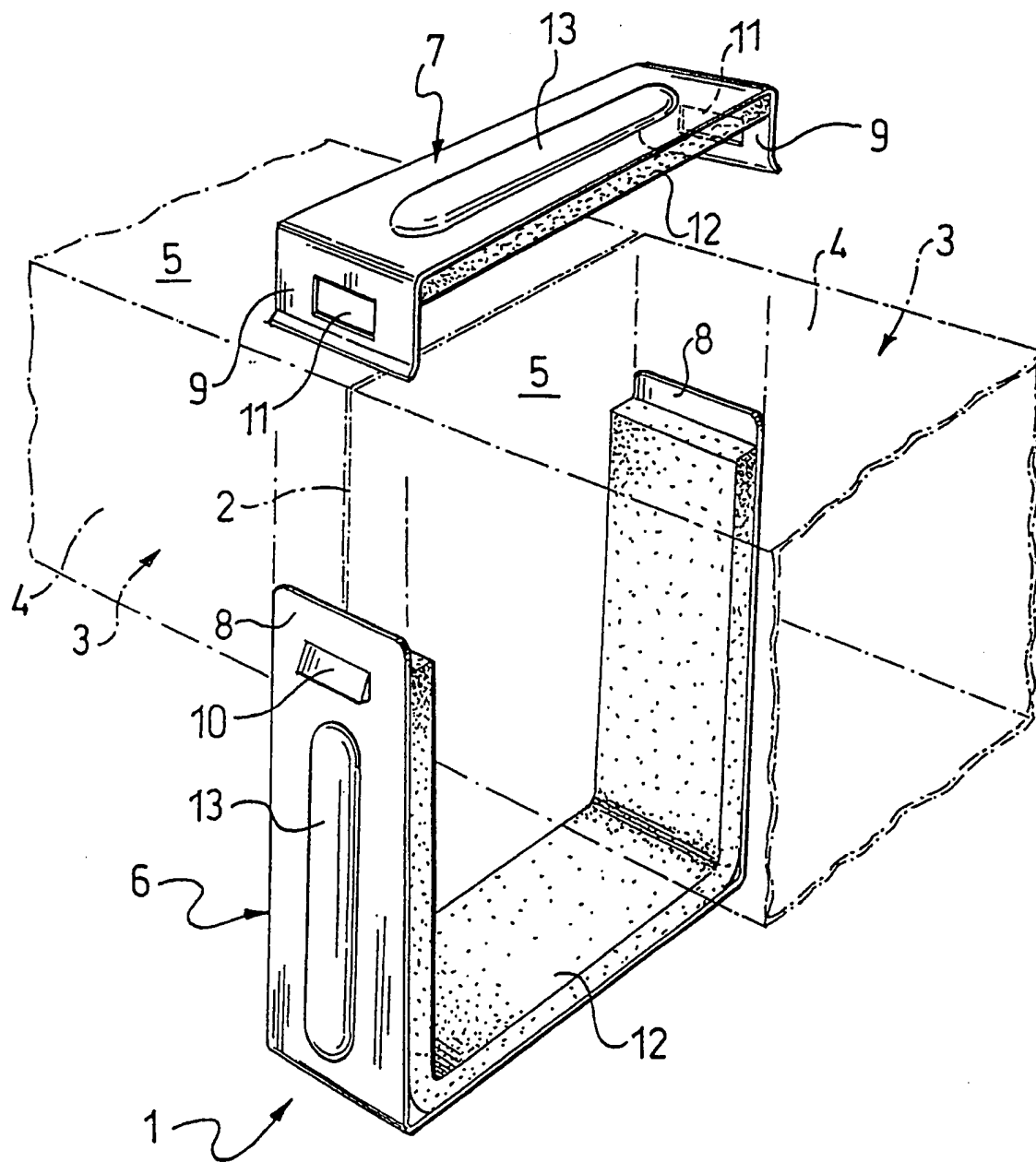


FIG.1

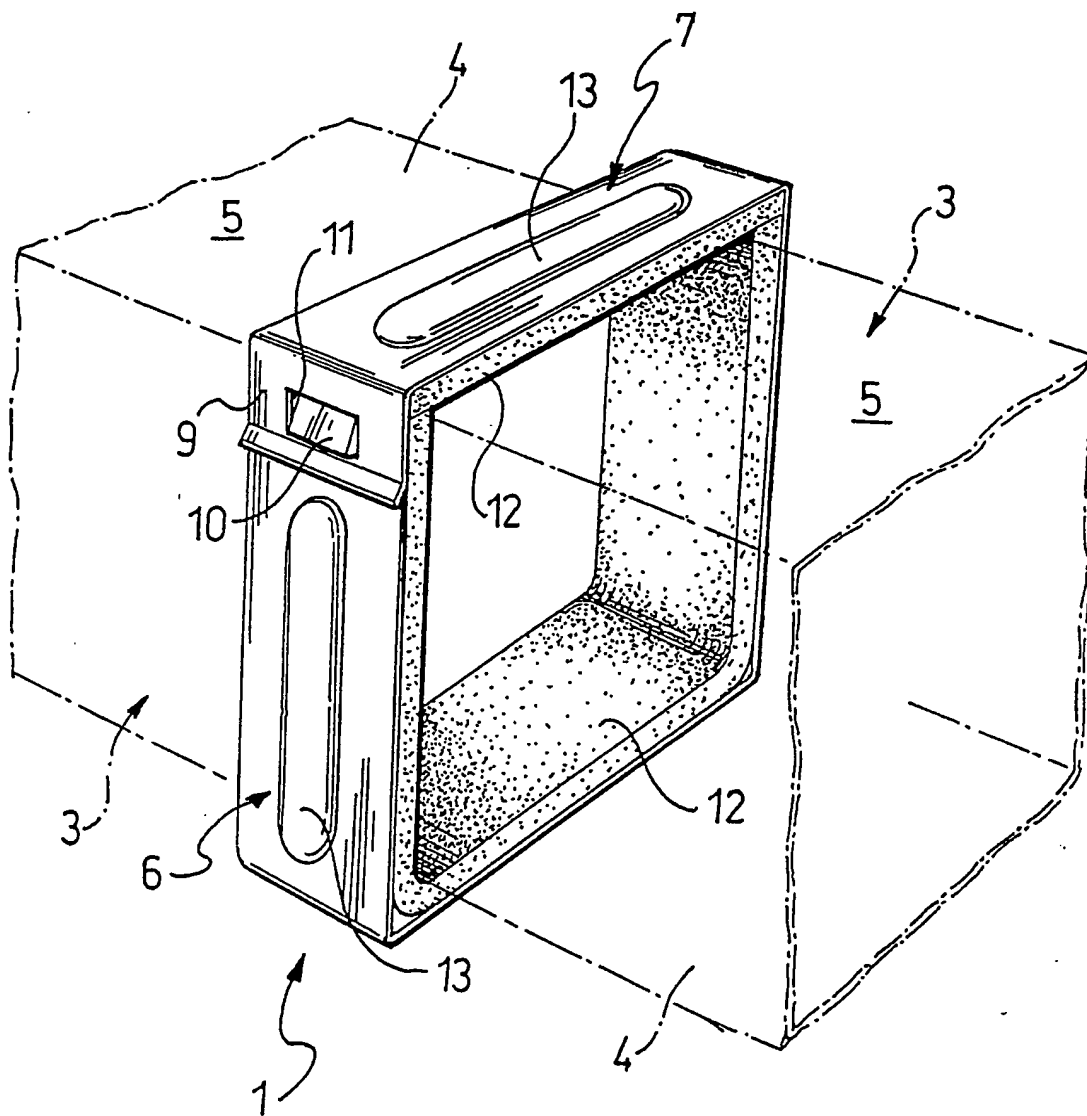


FIG.2

A SEALING GASKET FOR USE IN JOINTS BETWEEN
ASSEMBLY ELEMENTS FOR LAYING AND ENCASING
ELECTRIC CABLES

DESCRIPTION

This invention relates to a sealing gasket for use in joints between assembly elements for laying and encasing electric cables.

The field of application of this invention is, but not exclusively, that of raceways for electric cable laying. Raceways of this kind have a substantially U-shaped cross-sectional outline and are connected together by means of jointing members.

It is a recognized fact that assembly or built-up raceways of the kind set forth above are widely employed, especially in industrial environments, to provide sealed ducts for accommodating and protect electric cables.

The degree of protection afforded by such raceways once assembled is rated by an international standard identified with the code "IP" (International Protection) followed by a two-digit number, the first of said digits denoting the degree of protection against penetration by solid matter exceeding 1 mm in diameter, whereas the second of said digits denotes the degree of protection against sprinkled water under a pressure of 1 atmosphere.

For instance, a raceway having a degree of protection rated at "IP40" would keep out solid matter to a high degree but afford no protection against water seepage.

Also recognized is that most of the problems encountered to seal off the raceways against water seepage come from the presence of connection joints between raceway sections.

Also, servicing operations often require that a high degree of tightness versus water penetration be conferred on a previously installed raceway only affording protection against solid matter and/or dust penetration.

That is, there may be occasions when a degree of protection of "IP44" should be conferred on pre-installed raceway which is rated for "IP40" protection.

In an effort to fill the above-discussed demand, the prior art has proposed of associating, with the joint exterior, a sealing gasket held in place by plate-like members affixed to the raceway by means of screw fasteners.

This approach, while basically achieving its objective, has a serious drawback in that mounting such sealing gaskets to raceways which have been installed against walls or ceilings may prove a difficult task for the installer.

The application of such a sealing gasket to an existing raceway, wherethrough electric lines have already been laid, is a troublesome and complicated operation that may on occasions require that the raceways be disassembled.

In addition, the provision of clearance screw fasteners may imperil the tight-sealed feature of the raceway.

Another drawback of sealing gaskets according to prior designs is that they interfere with the electric continuity of the raceway sections which, as is well-known, should be all grounded. The presence of an insulative gasket may, in fact, lower the contact pressure between conductive portions of the raceway, with the consequent risk that sections of the raceway may be cut off from the ground connection.

It is an object of this invention to provide a sealing gasket having specially simple construction and performance features, such that the protection rating of a pre-installed raceway can be enhanced and the work of the person(s) in

charge of the operation facilitated, while leaving the electric continuity of the raceway unaffected.

This object is achieved by a sealing gasket as indicated being characterized in that it comprises a holding structure consisting of a pair of plate-like members fitting releasably by snap action around a joint to define a joint-covering seal ring.

In a preferred embodiment, said plate-like members are bent the one to an essentially U-like shape and the other essentially to a C-like shape with snap-connected corresponding ends.

The features and advantages of a sealing gasket according to the invention will be more clearly understood from the following detailed description of an embodiment thereof, given by way of non-limitative example with reference to the accompanying drawings.

In the drawings:

Figure 1 is an exploded perspective view of a sealing gasket according to the invention; and

Figure 2 is a further perspective view of the sealing gasket of Figure 1 shown in a working condition.

With reference to the drawing views, generally shown at 1 is a sealing gasket intervening between joints 2 of assembly elements 3 for laying and enclosing electric cables, not shown because conventional.

The elements 3 are made up, in particular, of channel sections 4 having a U-shaped cross-sectional outline and being joined to one another by means of said joints 2.

The channel sections 4 are preferably formed from sheet metal and each provided with a flat cover 5 releasably attached to the channel section in sealed relationship so as to provide

a raceway having a square or rectangular overall cross-section shape.

Advantageously according to the invention, the sealing gasket 1 is effective to provide said raceway with protection features of a high degree against penetration by sprinkled water under pressure. More specifically, the sealing gasket 1 is designed to confer on the raceway a degree of protection corresponding to an international rating of IP44.

In this connection, the sealing gasket 1 comprises a holding structure composed of a pair of plate-like members 6 and 7 releasably fitted by snap action around the joint 2 so as to define a tight joint-covering ring.

More particularly, a first 6 of said members is bent essentially to a U-like shape, and the other 7 is bent essentially to a C-like shape.

Such members 6 and 7 have corresponding ends 8 and 9 which are made unitary by a tooth 10 snap fitting into a respective aperture formed in the corresponding end of the other of said members.

Thus, the C-shaped member 7 has opposed ends 9 which are provided each with apertures 11, while the other member, bent to a U-shape, has its opposed ends 8 formed with respective outwardly pointing detent teeth 10.

Each of the members 6 and 7 has raceway-side walls, hereinafter referred to as the inward walls of the sealing gasket 1, which have a rubber seal 12 attached thereto. In particular, the member 6, set astride the raceway at the location of the joint 2, has substantially three inward walls associated with the raceway across which the seal 12 of unitary construction extends and is

secured.

For completing the description, it should be noted that parallel sections of the holding structure for the gasket 1 are each formed with a central strengthening rib 13.

It may be appreciated from the foregoing description that an installer can quite simply associate each gasket 1 with each joint 2 between channel sections 4 to impart the raceway with increased protection from the standpoint of water seepage prevention.

At the location of each joint 2, the member 6 can be mounted to straddle the raceway and snap attached to the corresponding member 7 to provide a tight joint-covering ring.

It should be noted that the installer would complete his job from the raceway exterior and leave the conductive state of the same unaltered.

Thus, the sealing gasket of this invention has a major advantage in that it is of great simplicity construction- and function-wise and yet enables the protection rating (IP) of a pre-installed raceway to be upgraded.

CLAIMS

1. A sealing gasket (1) for use in joints (2) between assembly elements (3) for laying and encasing electric cables, characterized in that it comprises a holding structure consisting of a pair of plate-like members (6,7) fitting releasably by snap action around a joint (2) to define a joint-covering seal ring.

2. A sealing gasket according to Claim 1, characterized in that said plate-like members (6,7) are essentially bent, the one to a U-like shape and the other to a C-like shape.

3. A sealing gasket according to Claim 2, characterized in that the respective free ends of said members (6,7) are provided with means and mating counter-means of securing said members by snap action.

4. A sealing gasket according to Claim 3, characterized in that said means and mating counter-means comprise a tooth (10) formed integrally with each end of one member (6) and an aperture or tooth-receiving seat (11) cut through each corresponding end (9) of the other member (7).

5. A sealing gasket according to Claim 1, characterized in that a rubber seal is affixed to the inward walls of said ring.